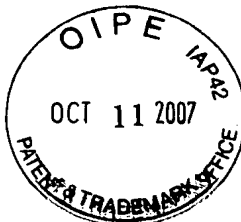


Doc Code: AP.PRE.REQ



PTO/SB/33 (07-05)

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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

081468-0308853

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

on _____

Signature _____

Typed or printed name _____

Application Number

10/813,687

Filed

March 31, 2004

First Named Inventor

TINNEMANS

Art Unit

2851

Examiner

Hung Nguyen

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

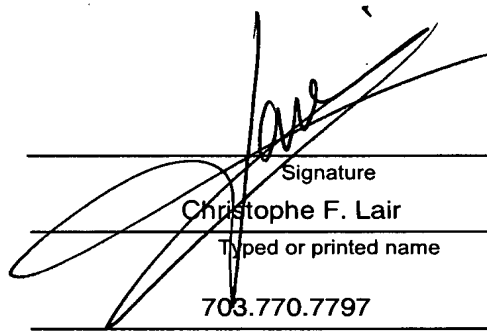
Note: No more than five (5) pages may be provided.

I am the

- ☐ applicant/inventor.
- ☐ assignee of record of the entire interest.
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.
Registration number 54,248

☐ attorney or agent acting under 37 CFR 1.34.
Registration number if acting under 37 CFR 1.34 _____



Signature
Christophe F. Lair

Typed or printed name
703.770.7797

Telephone number

October 11, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☒ *Total of 1 forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Attorney Docket: 081468-0308853
Client Reference: P-1622.010-US



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of:

Confirmation Number: 4349

TINNEMANS ET AL.

Application No.: 10/813,687

Group Art Unit: 2851

Filed: March 31, 2004

Examiner: Hung Nguyen

Title: LITHOGRAPHIC SUPPORT STRUCTURE

Due October 11, 2007

ATTACHMENT SHEETS TO PRE-APPEAL BRIEF CONFERENCE REQUEST

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Final Office Action dated June 11, 2007 ("Final Action") and the Advisory Action dated August 31, 2007, Appellants hereby request that a panel of examiners formally review the legal and factual basis of the rejections in the above-identified application prior to the filing of an appeal brief. This request is being concurrently filed with a Notice of Appeal. The review is requested for the reasons provided in the Remarks beginning below. A total of 4 pages are provided.

APPEALED REJECTION

Appellants are appealing the rejections of claims 1, 5-10, 15, 26 and 27 under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 6,828,772 B1 to Hofer *et al.* ("Hofer") and claims 1, 5-6, 8, 10, 15, 18, 21 and 23-27 under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 6,404,483 to Segers *et al.* ("Segers").

ARGUMENTS FOR TRAVERSAL

Appellants traverse the prior art rejections under 35 U.S.C. §§102(e) and (b) at least because, as will be evident by the following discussion, the cited portions of the applied references *do not disclose, either expressly or inherently, each and every element recited by the claims.*

A) Rejections of claims 1, 5-10, 15, 26 and 27 under 35 U.S.C. §102(e) based on Hofer.

Claim 1 recites a lithographic support system, comprising, *inter alia*, a moveable support structure configured to support and move an object, said support structure comprising a robot arm having a rod coupled to a support frame that is provided with a clamp that clamps the object; and ***a compliant structure configured to compensate for at least one of a tilt and displacement between said object and said clamp, the compliant structure being provided at least between the rod and the support frame.***

It is respectfully submitted that there is nothing in the cited portions of Hofer that remotely discloses, teaches or suggests *each and every limitation* of claim 1, including the features identified above. In order to establish a *prima facie* rejection “the identical invention **must** be shown **in as complete detail as is contained in the ... claim.**” (See MPEP §2131, citing Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989), emphasis added). MPEP §2131 also indicates that “the elements **must be arranged as required by the claim.**” (See MPEP §2131, citing In re Bond, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990), emphasis added). The Final Action does not meet these requirements.

For example, the Examiner has failed to identify in Hofer the invention in as complete detail as is contained in claim 1. The Examiner identifies the gripper arm 60 of Hofer as being both the clamp and the frame of claim 1. *See* page 3 of the final Office Action. This is incorrect. Claim 1 recites various elements that are arranged in a specific manner. According to claim 1, the support frame is provided with a clamp and the compliant structure is provided at least between the rod and the support frame. The Examiner is respectfully requested to show in Hofer the identical invention of claim 1 or withdraw the rejection.

As another example, the Examiner alleges that the recited compliant structure that is **configured to compensate for at least one of a tilt and displacement between the object and the clamp** is analogous to the wedge assembly 50 of Hofer. In particular, the Final Action alleges that the semiconductor wafer/object 40 is forced upward along an incline area on the wedge assemblies 50, 55 and thus one of the functions of the wedge assemblies 50, 55 is to secure the wafer and to neutralize the effect of variations, such as displacement, between the wafer/object 40 and the clamp 60. The Final Action cites column 6, lines 2-24 of Hofer for support. [Final Action, page 3]. Appellants strenuously disagree and submit that the Final Action is utterly incorrect on these assertions.

By way of review, Hofer discloses a hollow flipper shaft 20 and a mounting head 90 which “locks the flipper shaft 20 to the wafer holding structure 10.” *See*, column 6, lines 30-33 of Hofer. In particular, the cited portions of Hofer disclose a wedge assembly 50 including a rubber material to frictionally engage and hold the wafer within the holding structure 10. *See*, column 6, lines 9-11 of Hofer.

This is in striking contrast to the recited compliant structure, as claimed in claim 1, which is configured to compensate for at least one of a tilt and displacement between the object and the clamp. There is nothing within the cited portions of Hofer to disclose that the wedge assembly is configured to perform this function.

Unlike the compliant structure of claim 1, the wedge assembly 50 of Hofer is merely a receptacle that is used to hold the substrate 40 within the holding structure 10. The wedge assembly 50 of Hofer does not compensate for at least one of a tilt and displacement between the substrate 40 (identified by the Examiner as the “object” of claim 1) and the gripper arm 60 (identified by the Examiner as the “clamp” of claim 1). In support of this, the cited portions of Hofer disclose that tension springs 70 located near the mounting head 90 and along the portion of the holding structure 10 adjacent to the gripper arms 60 are used to pull the gripper arms 60 together so as to secure the substrate within the holding structure 10. When the gripper arms 60 are pulled together by the tension springs 70, the substrate 40 is forced upward along an incline area on the wafer assemblies 50 and 55, and into the wedge slots on the wedge assemblies 50 and 55. Thus, Hofer makes use of the tension springs 70 to force the substrate 40 to remain in position within the wedge assemblies 50, 55. With this said, assuming now, *arguendo*, that the substrate 40 being held by the gripper arms 60 of the wafer holding structure 10 was moving due to, for example, a lack of pressure exerted by the tension springs 70, there would be nothing in Hofer’s apparatus to compensate (i.e. make up for) for that movement. In particular, if the substrate 40 were to be moved relative the gripper arms 60, the wedge assemblies 50 and 55 would be unable to compensate for any movement, tilt or displacement between the substrate 40 and the gripper arms 60. Quite to the contrary, if the substrate 40 of Hofer were to be moved, the substrate 40 would partly or completely disengage the wedge assemblies 50, 55 and, as a result, would possibly fall through the holding structure 10. Had the wedge assembly 50 been configured to compensate for a movement between the substrate 40 and the gripper arms, the wedge assembly 50 would have moved to make up for such a movement. However, these features are not taught in Hofer. Thus, there is nothing within the cited portions of Hofer to compensate for at least one of a tilt and displacement between the object and the clamp as presently claimed.

Claims 15 and 26 are patentable over the cited portions of Hofer at least the same reasons as provided above for claim 1. Claims 3-8, 10, 16-17 and 27 depend respectively from claims 1, 15 and 26, and are, therefore, patentable for at least the same reasons provided above related to claims 1, 15 and 26, and for the additional features recited therein.

B) Rejections of claims 1, 5-6, 8, 10, 15, 18, 21 and 23-27 under 35 U.S.C. §102(b) based on Segers.

Claim 1 is discussed above. By way of review, Segers discloses a pick-up hand 133 that is provided on the end of arm 131, and further discusses two fingers 134 which are inserted underneath a substrate W, to pick-up the substrate W. The pick-up hand 133 carries coupling half 135a, which mates with a corresponding coupling half 135(b), on the pre-aligner 2. The coupling (135a, 135b) is used to ensure that the pick-up hand 133 is accurately positioned relative to the pre-aligner 2 when the substrate W is picked up. *See*, column 7, lines 6-18 and Figs. 5a-5c of Segers.

The Final Action alleges that the recited compliant structure that is configured to compensate for at least one of a tilt and displacement between the object and the clamp is analogous to the coupling half 135a of Segers. Respectfully, the Final Action is utterly incorrect on this assertion.

In particular, the Final Action relies upon column 7, lines 10-25 to disclose these features, which states

A pick-up hand 133 is provided on the end of arm 131 and has two fingers 134 which are inserted underneath wafer W, as shown in FIG. 5C, to pick-up the wafer W. The pick-up hand 133 also carries one coupling half 135a of which mates with a corresponding coupling half 135b (the "coupling means") provided on the pre-aligner 2. The coupling 135a, 135b is used to ensure that the pick-up hand 133 is accurately positioned relative to the pre-aligner 2 when the wafer W is picked up. The connection between the pick-up hand 133 and arm 131 allows a certain amount of movement between them so that the pick-up hand can be moved into correct alignment by the coupling 135a, 135b even if the arm 131 is not perfectly aligned. Hence, the wafer is accurately positioned on the pick-up hand 133 and can be placed on the wafer table WT with corresponding accuracy.

At most, this section discloses that the connection between the pick-up hand 133, which includes the coupling half 135a, and the arm 131, allows a certain amount of movement between the two structures. However, there is nothing to disclose that the coupling half 135a is configured to compensate for at least one of a tilt and displacement between the substrate W (identified by the Examiner as the "object" of claim 1) and the fingers 134 (identified by the Examiner as the "clamp" of claim 1). In support of this, assuming,

arguendo, that the pick-up hand 133 is disengaged from the pre-aligner 2, i.e. the coupling half 135a is disengaged from the coupling half 135b, then, there is nothing in Segers' apparatus to compensate for a displacement or tilt between the substrate W and the fingers 134. In such a configuration, the coupling half 135a is merely a part that is attached to the pick-up hand 133. *See, e.g.*, Figure 5A-B of Segers. On the other hand, assuming, *arguendo*, that the pick-up hand 133 is coupled to the pre-aligner 2, i.e. the coupling half 135a engages the coupling half 135b (*see* Figure 5C of Segers), then, there is nothing in Segers' apparatus to compensate for a displacement or tilt between the substrate W and the fingers 134. In particular, in the configuration of Figure 5C of Segers, if the substrate W moves relative to the fingers 134, the coupling half 135a (and/or coupling half 135b) is unable to compensate for such a movement. The coupling half 135a (and coupling half 135b) is merely used to ensure that the fingers 134 remain fixed during transfer of the substrate W of the pick-up hand 133.

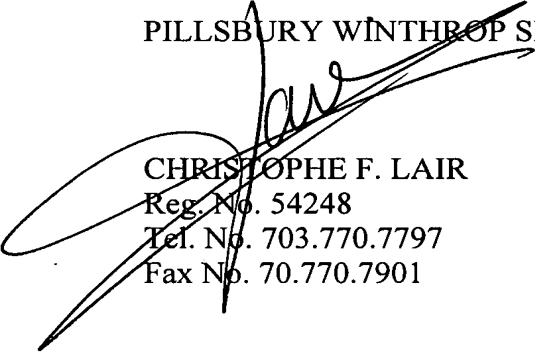
Claims 15, 18, 21 and 26 are patentable over the cited portions of Segers at least the same reasons as provided above for claim 1. Claims 5-6, 8, 10, 23-25 and 27 depend respectively from claims 1, 15, 18, 21 and 26, and are, therefore, patentable for at least the same reasons provided above related to claims 1, 15, 18, 21 and 26, and for the additional features recited therein.

Therefore, it is respectfully requested that the panel return a decision concurring with Appellants' position and eliminating the need to file an appeal brief because there are clear legal and/or factual deficiencies in the appealed rejections.

Please charge any fees associated with the submission of this paper to Deposit Account Number **03-3975**. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



CHRISTOPHE F. LAIR
Reg. No. 54248
Tel. No. 703.770.7797
Fax No. 70.770.7901

CFL/CMT
P.O. Box 10500
McLean, VA 22102
(703) 770-7900